

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant:	Daniel J. Fisher	Examiner:	Bryan R. Muller
Serial No.:	10/821,071	Group Art Unit:	3723
Filed:	April 8, 2004	Docket No.:	M120.253.101 / 59554US002
Due Date:	June 17, 2007		
Title:	ATTACHMENT SYSTEM FOR A SANDING TOOL		

APPEAL BRIEF UNDER 37 C.F.R. §41.37

Mail Stop Appeal Brief – Patents

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir/Madam:

This Appeal Brief is submitted in support of the Notice of Appeal filed on April 17, 2007, appealing the final rejection of claims 1-9, 14, 15, 28-34, 37, 38, 41, and 42 of the above-identified application as set forth in the Final Office Action mailed January 17, 2007.

The U.S. Patent and Trademark Office is hereby authorized to charge Deposit Account No. 50-0471 in the amount of \$500.00 for filing a Brief in Support of an Appeal (as set forth under 37 C.F.R. §41.20(b)(2)). At any time during the pendency of this application, please charge any required fees or credit any overpayment to Deposit Account No. 50-0471.

Appellant respectfully requests consideration and reversal of the Examiner's rejection of claims 1-9, 14, 15, 28-34, 37, 38, 41, and 42.

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REAL PARTY IN INTEREST

The real party in interest is 3M Company (formerly known as Minnesota Mining and Manufacturing Company) of St. Paul, Minnesota and its affiliate 3M Innovative Properties Company of St. Paul, Minnesota.

RELATED APPEALS AND INTERFERENCES

Appellant is unaware of other prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this Appeal.

STATUS OF CLAIMS

Claims 1-16, 28-34, 37, 38, 41, and 42 are pending in the application. Claims 10-13 and 16 have been previously withdrawn from consideration. Claims 17-27, 35, 36, 39 and 40 have been previously cancelled from the application. Claims 1-9, 14, 15, 28-34, 37, 38, 41, and 42 were finally rejected in the Final Office Action mailed January 17, 2007, and are the subject of the present Appeal.

Appellant notes dependent claims 2 and 3 have been objected to because of informalities, with the Examiner suggesting specific amendments to claims 2 and 3 to correct the informalities. No arguments are presented herein regarding the objections to claims 2 and 3, as Appellant will amend claims 2 and 3 as suggested by the Examiner pending resolution of the substantive rejections under 35 U.S.C. §102 and 35 U.S.C. §103.

STATUS OF AMENDMENTS

No amendments are pending. As set forth above under the heading "Status of Claims," pending resolution of the substantive rejections under 35 U.S.C. §102 and 35 U.S.C. §103, claims 2 and 3 will be amended to correct informalities as suggested by the Examiner pending resolution of the rejections under 35 U.S.C. §102 and 35 U.S.C. §103.

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SUMMARY OF THE CLAIMED SUBJECT MATTER

This Summary is set forth as exemplary embodiment of the language corresponding to independent claims 1, 28, and 37. Discussions about features of claims 1, 28, and 37 can be found at least at the cited locations in the specification and drawings.

Claim 1 relates to a conversion pad for attaching an abrasive article to a back-up pad of a sanding tool, said conversion pad having a non-adhesive engagement surface releasably attached to the back-up pad and an attachment system comprising a first major surface opposite the non-adhesive surface that includes an attachment region with attachment material for attachment with an associated mating surface, and a non-attachment region along at least a portion of an edge of said first major surface for forming an attachment with the associated mating surface that is weaker than the attachment between the attachment region and the associated mating surface, whereby a user can grasp a portion of the abrasive article adjacent the non-attachment region and thereby separate the abrasive article from the first major surface. (Elements 4, 6, 8, 14, 16, 20, 22, 24; p. 6, l. 28 through p. 8, l. 17; p. 10, l. 8 through p. 11, l. 9; p. 11, l. 20 through p. 13, l. 15; FIGS. 1-3A and 6A-8).

Claim 28 relates to a conversion pad for attaching an abrasive to a sanding tool, said conversion pad comprising first and second opposed major surfaces, said first major surface being adapted for engagement with a back-up pad of said sanding tool and said second major surface including an attachment surface including attachment material for attaching said conversion pad with an abrasive article and a non-attachment surface along at least a portion of an edge region of said second surface, thereby to allow a user to grasp the abrasive article and separate the abrasive article from the conversion pad, wherein said attachment surface and said non-attachment surface each terminate opposite said first major surface, and further wherein said attachment and non-attachment surfaces are co-planar opposite said first major surface. (Elements 4, 6, 8, 14, 16, 20, 22, 24; p. 6, l. 28 through p. 8, l. 17; p. 10, l. 8 through p. 11, l. 9; p. 11, l. 20 through p. 13, l. 15; FIGS. 1-3A and 6A-8).

Claim 37 relates to an abrading tool including a back-up pad, a conversion pad connected with the back-up pad, and an abrasive article connected with the conversion pad, wherein the

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back-up pad, the conversion pad and the abrasive article have substantially the same profile and have aligned outer edges, and further wherein the conversion pad comprises first and second opposed major surfaces, said second major surface including an attachment region including attachment material for attaching said conversion pad with the abrasive article and a non-attachment region along at least a portion of an edge region of said second surface, thereby to allow a user to grasp the abrasive article and thereby separate the abrasive article from the conversion pad. (Elements 4, 6, 8, 14, 16, 20, 22, 24; p. 6, l. 28 through p. 8, l. 17; p. 10, l. 8 through p. 11, l. 9; p. 11, l. 20 through p. 13, l. 15; FIGS. 1-3A and 6A-8).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

I. First Grounds of Rejection

Claims 28-32 stand rejected under 35 U.S.C. §102(b) as being anticipated by Kleemeier, U.S. Patent No. 3,527,001 ("Kleemeier").

II. Second Grounds of Rejection

Claims 1-7, 14, and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kleemeier, U.S. Patent No. 3,527,001 ("Kleemeier") in view of Edinger, U.S. Patent No. 6,394,887 ("Edinger").

III. Third Grounds of Rejection

Claims 8 and 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kleemeier, U.S. Patent No. 3,527,001 ("Kleemeier") in view of Edinger, U.S. Patent No. 6,394,887 ("Edinger"), as applied to claim 1, and further in view of Long et al., U.S. Patent No. 6,210,389 ("Long").

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IV. Fourth Grounds of Rejection

Claims 33 and 34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kleemeier, U.S. Patent No. 3,527,001 (“Kleemeier”) in view of Long et al., U.S. Patent No. 6,210,389 (“Long”).

V. Fifth Grounds of Rejection

Claims 37, 38, and 41 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kleemeier, U.S. Patent No. 3,527,001 (“Kleemeier”) in view of any one of Ali, U.S. Patent No. 4,617,767 (“Ali”), Edinger, U.S. Patent No. 6,394,887 (“Edinger”), Clemente, U.S. Patent No. 3,875,703 (“Clemente”), and Manor et al., U.S. Patent No. 5,807,161 (“Manor”).

VI. Sixth Grounds of Rejection

Claim 42 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kleemeier, U.S. Patent No. 3,527,001 (“Kleemeier”) in view of any one of Ali, U.S. Patent No. 4,617,767 (“Ali”), Edinger, U.S. Patent No. 6,394,887 (“Edinger”), Clemente, U.S. Patent No. 3,875,703 (“Clemente”), and Manor et al., U.S. Patent No. 5,807,161 (“Manor”), as applied to claim 37, and further in view of Long et al., U.S. Patent No. 6,210,389 (“Long”).

ARGUMENT

I. Applicable Law

It is well-accepted that, to anticipate a claim under 35 U.S.C. §102, the cited reference must disclose each and every claim element. MPEP §2131. In order for a claim to be anticipated, the identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Anticipation under §102 can be found only where the reference discloses exactly what is claimed. *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985). In determining that quantum of prior art disclosure which is necessary to declare an applicant’s invention “not novel” or “anticipated” within section 102, the stated test is whether a reference contains an “enabling disclosure.” *In re*

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Hoeksena, 158 USPQ 596 (CCPA 1968). The disclosure in an assertedly anticipating reference must provide an enabling disclosure of the desired subject matter; mere naming or description of the subject matter is insufficient, if it cannot be produced without undue experimentation. *Elan Pharm., Inc. v. Mayo Found. for Med. Educ. & Research*, 68 USPQ2d 1373, 1376 (Fed. Cir. 2003).

Patent Examiners carry the responsibility of making sure that the standard of patentability enunciated by the Supreme Court and by the Congress is applied in each and every case. MPEP §2141. The Examiner bears the burden under 35 U.S.C. §103 in establishing a *prima facie* case of obviousness. *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). “Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. ___, *slip opinion at page 14* (2007); *In re Khan*, 78 USPQ2d 1329 (Fed. Cir. 2006). In this regard, identification of a teaching, suggestion, or motivation for modifying a reference or combination of the teachings of multiple references provides helpful insight. *KSR*, 550 U.S. at ___, *slip opinion at page 15*. “An obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. ___, 2007 WL 1237837, at *12 (2007) (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”).” *Leapfrog Enterprises Inc. v. Fisher-Price Inc.*, 82 USPQ2d 1687, 1690-1691 (Fed. Cir. 2007).

II. First Grounds of Rejection

Claims 28-32 stand rejected under 35 U.S.C. §102(b) as being anticipated by Kleemeier.

The Office Action states:

“In reference to claim 28, Kleemeier discloses a conversion pad (either 13, 14 & 15 or 14 & 15 alone) for attaching an abrasive article to the back-up pad of a sanding tool (the attachment to a back-up pad is the intended use; however, in the

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case that the conversion pad is layers 14 and 15, the conversion pad is attached to back-up pad 13, or in the case that the conversion pad is considered to be layers 13, 14, and 15, the conversion pad is inherently capable of being attached to a back-up pad), said conversion pad comprising first and second opposed major surfaces, said first major surface being adapted for engagement with the back-up pad (again, intended use, but both interpretations of the conversion pad of Kleemeier are inherently capable of engagement with the back-up pad) and said second major surface including an attachment surface including attachment material (15) for attaching said conversion pad with an abrasive article and a non-attachment surface along at least a portion of an edge region of said second surface (there is clearly an annular portion around the outer edge of the first major surface that does not have any attachment material), thereby to allow a user to grasp the abrasive article and separate the abrasive article from the conversion pad, wherein said attachment surface and said non-attachment surface each terminate opposite and first major surface, and further wherein said attachment and non-attachment surfaces are co-planar opposite said major surface. As discussed in the previous office action, the resin layer (14) which forms the non-attachment region has one end of the attachment region and non-attachment region have sections that are located within the same plane and are thus, co-planar.”

(Final Office Action, para. 5).

Claim 28 recites a conversion pad having a first major surface and a second major surface. The second major surface includes an attachment surface and a non-attachment surface, **“wherein said attachment surface and said non-attachment surface each terminate opposite said first major surface, and further wherein said attachment and non-attachment surfaces are co-planar opposite said first major surface.”**

As understood by Appellant, the Final Office Action characterizes the “attachment surface” of Kleemeier as extending from the free ends of fibers 16, 17 (e.g. heads 16a, 17a) to the surface of the resin layer 14 in which fibers 16, 17 are secured, and further characterizes the “non-attachment surface” of Kleemeier as the surface of resin layer 14 at the perimeter of member 15 that is free of fibers 16, 17. The Final Office Action then concludes that one end of the “attachment surface” (e.g., the portion of fibers 16, 17 at the surface of resin layer 14) and “non-attachment surface” have sections that are located within the same plane (e.g., the surface of resin layer 14), and are thus co-planar.

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The characterization of Kleemeier as set forth in the Final Office Action is respectfully traversed. Specifically, claim 28 sets forth that the attachment surface and the non-attachment surface each terminate opposite the first major surface. Appellant submits that, with respect to claim 28, the “attachment surface” is a terminal face opposite an opposed major surface of the conversion pad. As applied to Kleemeier, then, the “attachment surface” of Kleemeier (commensurate with claim 28) is defined by the terminal ends of the fibers 16, 17 (e.g. heads 16a, 17a). Given this understanding, the “attachment surface” of Kleemeier is not co-planar with the “non-attachment surface” of Kleemeier (e.g., the perimeter of the resin layer 14 free of the attachment members 16 or 17). That is, the terminal free ends of fibers 16, 17 are not coplanar with the surface of resin layer 14.

Regarding Appellant’s argument regarding the characterization of Kleemeier with respect to claim 28, the Final Office Action states,

“If the attachment surface is only defined by the terminating ends of the attachment members, ..., then the limitations that the attachment and non-attachment surfaces are co-planar is only represented by the applicant’s embodiments shown in Figures 5A, 5B, 6A and 6B, which represent non-elected species IIIB, providing the non-attachment region by applying a coating to the attachment members in the non-attachment surface. Thus, for the examiner’s rejection, regarding the attachment and non-attachment surfaces being co-planar, to be overcome by the applicants argument defining the attachment surface as being “limited to the terminating ends of the attachment members”, claims 28-34 would effectively be withdrawn as reading on previously non-elected species.

(Final Office Action, para. 5).

Appellant respectfully disagrees with the Examiner’s conclusion. As correctly represented above, non-elected species III.B relates to “coating applied to fastening elements” as the manner of inhibiting attachment. (Office Action mailed October 4, 2005, para. 1). In addition, Figures 5A-5B of the application do show coating the fastening elements 26 with a hardenable liquid. However, Figures 6A-6B do not show a coating applied to fastening elements 26 to inhibit attachment. Rather, Figures 6A-6B show non-attachment region 22 as a lip or ridge 36, such that non-attachment region 22 has the same height as the attachment region 20. (Page

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11, lines 15-27). Thus, Appellant submits the arguments as set forth above do not cause claim 28 to read on non-elected species III.B.

For at least the reasons set forth above, claim 28 is believed allowable over Kleemeier. Claims 29-32 depending from independent claim 28 are also believed to be allowable at least by reason of their dependency from an allowable claim.

III. Second Grounds of Rejection

Claims 1-7, 14, and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kleemeier in view of Edinger.

The Office Action states:

“Edinger discloses a similar conversion pad providing multiple attachment systems to attach an adhesive article to a sanding tool and teaches that multiple attachment systems, such as adhesives, hook and loop fasteners or magnets, may be alternately substituted for one another to accommodate different tools or abrasive articles and that different attachment systems may be desirable for different applications. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the adhesive used to attach the conversion pad (13 and 14) of Kleemeier to the back-up pad (15) of Kleemeier may alternatively be replaced by other attachment systems such as either of a hook and loop fastener or a magnet to accommodate different back-up pads having a corresponding attachment system on a major side thereof.”

(Final Office Action, para. 12).

Kleemeier discloses a holder 10 for an abrasive product. Holder 10 includes an upper member 11 designed to attach to a conventional rotary floor sanding machine, a rigid plate 12 attached to the upper member 11, and a rubber layer 13 attached to the rigid plate 12. (Kleemeier, col. 2, ll. 35-48). The rubber layer 13 is provided to extend beyond the rigid plate 12 to prevent scratching or gouging of surfaces by the rigid plate 12 during floor polishing operations. (Kleemeier, col. 3, l. 74 through col. 4, l. 10) In this regard, the upper member 11, the rigid plate 12, and the rubber layer 13 are rigidly coupled together to define the holder 10 that attaches to the floor polishing machine.

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Kleemeier further discloses a driving layer 15 that attaches to the holder 10. Driving layer 15 includes fibers 16, 17 captured in a resinous layer 14 that has a pressure sensitive adhesive layer 18 coated on a side of the resin layer 14 opposite the fibers 16, 17. The driving layer 15 can be removed and replaced relative to the holder 10 with a minimum of effort (Kleemeier, column 2, lines 10-11) by virtue of the pressure sensitive adhesive layer 18 (Kleemeier, column 3, lines 68-74).

As set forth above, the Final Office Action takes the position that Kleemeier discloses a conversion pad that is either comprised of rubber layer 13, resin layer 14 and driving layer 15, or comprised of resin layer 14 and driving layer 15. In the Response to Arguments, the Final Office Action states: “layers 14 and 15 may be considered a conversion pad, which clearly changes the attachment system of the back-up pad 13 from a smooth surface for receiving adhesive to a surface having hook-type fasteners.” (Final Office Action, para. 33). Appellant respectfully disagrees, and submits Kleemeier fail to teach or reasonably suggest a conversion pad as described and claimed in the present application. A conversion pad is a pad removably (or releasably) placed on the surface of a back-up pad *to change the attachment system* provided on the back-up pad. Kleemeier fails to disclose a pad that is removably attached to a back-up pad to change the attachment system of a back-up pad. Kleemeier relates to a device for gripping non-woven fibrous discs, and describes various types of holders for such discs, all of which use projecting fibers to grip the non-woven disc. The driving layer 15 of Kleemeier is an improved version of such a holder with projecting fibers, but does not change the attachment system (e.g., projecting fibers). Accordingly, Kleemeier fails to disclose a conversion pad, and because Kleemeier does not contemplate accommodating abrasive discs with different attachment systems, there would be no reason for Kleemeier to provide a conversion pad.

Edinger does not remedy the deficiencies of Kleemeier. Specifically, as with Kleemeier, Edinger fails to disclose a conversion pad. Edinger clearly states: “abrasive article 24 preferably has adhesive backing on face 23” (Edinger, col. 2, l. 38-39), just as described with respect to the prior art abrasive article 14. Thus, there is not change in the attachment system (adhesive continues to secure the abrasive article), and adaptor 30 is not properly characterized as a

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conversion pad as described and claimed in the present invention. Further, because Edinger does not contemplate accommodating abrasive articles with different attachment systems, there would be no reason for Edinger to provide a conversion pad.

For at least the reasons set forth above, claim 1 is believed allowable over the combination of Kleemeier and Edinger. Claims 2-7, 14, and 15 depending from independent claim 1 are also believed to be allowable at least by reason of their dependency from an allowable claim.

IV. Third Grounds of Rejection

Claims 8 and 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kleemeier in view of Edinger, as applied to claim 1, and further in view of Long.

The Office Action states:

“In reference to claims 8 and 9, the combination of Kleemeier ... fails to disclose that the non-attachment region includes fastening elements that have been bent to inhibit attachment of said fastening elements with said associated mating surfaces. Long discloses a fastening system with a lifting region that provides a hook and loop fastening system with an attachment region (52) and a non-attachment region (41) wherein the hook-type fastening elements of the non-attachment region are bent to inhibit attachment of said fastening elements. The attachment system of Long would be more versatile because the attachment material is attached to the entire surface and any desired portion of the hook-type fasteners may be bent to provide a non-attachment region. Also, the hook-type fastening elements are easily bent to inhibit fastening, so it would be easier to produce the conversion pad by merely cutting or forming a piece of material to the desired shape and size, having the hook-type fasteners over the entire surface and modifying the desired portion to be the non-attaching region than to produce the conversion pad disclosed by Kleemeier, which is custom formed so that only certain portions of the pad contain the hook-type fasteners. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide one entire surface of the Kleemeier invention with the hook-type fastening elements and to bend the hook-type elements in the region that is desired to be non-attaching (in this case around the entire perimeter of the surface), as taught by Long, to provide any desired portion of the attachment surfaces as the non-attachment region.”

(Final Office Action, para. 22).

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The Office Action mailed July 31, 2006, agrees that Long is not from the same field of endeavor as the present application (Office Action, p. 11). However, the Final Office Action maintains that Long is pertinent because Long teaches that the non-attachment surface of Kleemeier may be formed by altering hook-type fasteners, and further because Long discloses that altered hook-type fastening elements provide a non-attachment surface that promotes “ease of unfastening and removal.” (Final Office Action, para. 33.c, citing Long at col. 2, ll. 13-14)..

The fastening system provided by Long is directed to providing a securement system that is secure enough to resist “premature pop-opens” in baby diapers (column 2, lines 5-14) while being gentle on the skin and easy to remove when the diaper becomes soiled. In this regard, it is submitted that even the most secure baby diaper fastening system (i.e., the “strongest”) of Long would be entirely ill-suited for attaching abrasives to sanding tools. The fastening systems of Long simply provide insufficient fastening attributes for sanding tools, such that one of skill in the sanding tool art would have no reason to look to the diaper fasteners of Long when attempting to advance the sanding tool art.

The position of the Federal Circuit is: “A reference is reasonably pertinent if . . . it is one which, because of the matter with which it deals, logically would have commended itself to the inventor’s attention in considering his problem . . . If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem . . . If is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it.” *In re Clay*, 966 F.2d 656, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992). In this regard, “the inventor” is in reference to the Appellant, and thus problems arising relative to the subject matter of the Appellant’s field of endeavor. It is improper to randomly select any “inventor” from any field/technology as “the inventor,” as apparently done in the Office Action. If examiners were allowed to randomly pick any inventor/field when analyzing the second factor under the non-analogous art test, it would essentially be impossible for any reference to be non-analogous. This clearly is not the intent of 35 U.S.C. §103 or MPEP §2141.01. Thus, the question is whether Long is reasonably pertinent to problems an inventor would encounter in removably attaching an abrasive article to a sanding tool. It is not.

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Long is related to easily removable baby diaper closures would in no manner logically commend itself to one of skill in the art of abrasive sanding tools when considering problems in this field. As such, Long is not reasonably pertinent to the particular problem with which the inventor is involved, such that Long is non-analogous art that is not available for a Section 103 determination. Thus, it is respectfully requested that the rejections of claims 8 and 9 under 35 U.S.C. §103(a) as unpatentable over Kleemeier in view of Edinger, and further in view of Long be withdrawn.

V. Fourth Grounds of Rejection

Claims 33 and 34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kleemeier in view of Long.

The Office Action states:

“In reference to claim 33, the conversion pad of claims 28 and 30-32, as disclosed by Kleemeier fails to disclose that the non- attachment region includes fastening elements that have been altered to inhibit attachment of the conversion pad with the abrasive pad. Long disclosed the fastening system and teaches the advantages of bending the fastening elements, as discussed supra. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide one entire surface of the Kleemeier invention with hook-type fastening elements and to bend the hook-type elements in the region that is desired to be non-attaching, as taught by Long, as discussed supra.”

(Final Office Action, para. 24).

Claims 33 and 34 depend from independent claim 28, which is to be believed in allowable condition for at least the reasons set forth above under the heading “First Grounds of Rejection.” Claims 33 and 34 are therefore also believed to be in allowable condition at least by reason of their dependency from an allowable claim.

Claims 33 and 34 are also believed to further define over the cited references for at least the reasons described above with respect to claims 8 and 9 under the heading “Third Grounds of Rejection.” Specifically, Appellant respectfully submits Long is not reasonably pertinent to the

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particular problem with which the inventor is involved, such that Long is non-analogous art that is not available for a Section 103 determination.

For at least these reasons, it is respectfully requested that the rejections of claims 33 and 34 under 35 U.S.C. §103(a) as unpatentable over Kleemeier in view of Long be withdrawn.

VI. Fifth Grounds of Rejection

Claims 37, 38, and 41 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kleemeier in view of any one of Ali, Edinger, Clemente, and Manor.

The Office Action states:

“In reference to claim 37, Kleemeier ... fails to disclose that the conversion pad also has the same profile and aligned outer edges with the back-up pad and the abrasive article. It is well known in the art that combinations of back-up pads, conversion pads and abrasive articles may often use combinations of different sized layers, specifically with circular abrasive pad combinations, the layers may have different diameters, and more commonly it is well known that all layers may have the same profile and aligned outer edges, as disclosed by Ali 4,617,767, Edinger 6,394,887, Clemente 3,875,703 and Manor et al. 5,807,161, in order to provide the outer edge of the abrasive article with sufficient support, because it is also well known that the outer edge of similar abrasive discs is often used more and has more pressure exerted thereon than the inner parts of the pad. Thus, support of the outer region is necessary to prevent damage to the outer edges of the abrasive article. Therefore, it would have been obvious to one of ordinary skill in the art at the same time the invention was made that different sized combinations of back-up pad, conversion pad and abrasive article may be used with the Kleemeier apparatus and further obvious that it would have been desirable to provide a conversion pad of Kleemeier that has the same profile and aligned out edges with the back-up pad and abrasive article, as disclosed by Ali, Edinger, Clemente and Major, to provide sufficient support to outer edges of the abrasive article, to prevent damage.”

(Final Office Action, para. 27).

To establish a *prima facie* case of obviousness, all three of the following basic criteria must be met: First, there must be some suggestion or motivation to modify or combine the reference teachings; second, there must exist a reasonable expectation of success; and third, the references must teach or suggest all of the claim limitations. MPEP §2143.

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As acknowledged in the Final Office Action, Kleemeier expressly provides that the rigid plate 12 is smaller in diameter than the rubber layer 13, such that the rubber layer 13 prevents scratching or gouging of surfaces by the plate 12 during floor polishing operations. (Final Office Action, para. 33.e.iv; Kleemeier, col. 3, l. 74 to col. 4, l. 10). Thus, the rubber layer 13 provides the dual function of being compressible to accommodate irregular floor surfaces, and extends beyond the plate 12 to provide “a bumper” to protect wall surfaces.

In FIG. 1, Kleemeier illustrates that none of the many layers of the holder 10 and the driving layer 15 extend beyond the perimeter of the rubber layer 13. In particular, Kleemeier specifically illustrates that the resin layer 14 is not aligned with the rubber layer 13, the filament heads 16 are not aligned with either the resin layer 14 or the rubber layer 13, and the rubber layer 13 extends beyond both the plate 12 and the driving layer 15 to provide a protective “bumper.”

The alleged motivation to modify Kleemeier as suggested in the Final Office Action is “to provide the outer edge of the abrasive article with sufficient support, because it is also well known that the outer edge of similar abrasive discs is often used more and has more pressure exerted thereon than the inner parts of the pad. Thus, support of the outer region is necessary to prevent damage to the outer edges of the abrasive article.” (Final Office Action, para. 27). However, Kleemeier is not concerned with damage to the outer edges of the abrasive article. Kleemeier is concerned with damage to wall surfaces. Ali, Edinger, Clemente, and Manor all fail to recognize or address such a concern.

Consequently, based upon the express disclosure in Kleemeier and in disagreement with the Examiner’s position, Appellant respectfully submits that there is no motivation to modify Kleemeier to align the edges of the holder 10, rubber layer 13, driving layer 15, and abrasive article 20, as required by independent claim 37. In fact, it is believed that Kleemeier teaches away from any such modification by specifically providing the rubber layer 13 to “prevent scratching or gouging of surfaces with which plate 12 might otherwise come in contact.” (Kleemeier, col. 4, ll. 8-9).

In addition, even if the teachings of Ali, Edinger, Clemente, and Manor motivated modification of Kleemeier to align edges of the rubber layer 13 and the driving layer 15 with the

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abrasive article 20, it is respectfully submitted that this modification would not have a reasonable expectation of success. In particular, aligning the edges in this manner would include at least some offset error relative to the layers that would impede the rubber layer 13 from preventing scratching or gouging of surfaces by the plate 12. In other words, stacking multiple layers of similar diameter is likely to result in one or more of the stacked layers extending beyond the rubber layer 13. Thus, it could not be assured that the rubber layer 13 would extend beyond these multiple stacked layers to “prevent scratching or gouging of surfaces with which plate 12 might otherwise come in contact,” as required by Kleemeier.

For all of the above reasons, it is respectfully submitted that independent claim 37, and claims 38 and 41 that depend from independent claim 37, are not rendered obvious over Kleemeier in view of any one of Ali, Edinger, Clemente, and Manor. It is therefore respectfully requested that the rejections to claims 37, 38, and 41 under 35 U.S.C. §103(a) as unpatentable over Kleemeier in view of any one of Ali, Edinger, Clemente, and Manor be withdrawn.

VII. Sixth Grounds of Rejection

Claim 42 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kleemeier in view of any one of Ali, Edinger, Clemente, and Manor, as applied to claim 37, and further in view of Long.

Claim 42 depends from claim 37, which is to be believed in allowable condition for at least the reasons set forth above under the heading “Fifth Grounds of Rejection.” Claim 42 is therefore also believed to be in allowable condition at least by reason of its dependency from an allowable claim.

In addition, as set forth above under the heading “Third Grounds of Rejection,” Appellant respectfully submits Long is not reasonably pertinent to the particular problem with which the inventor is involved, such that Long is non-analogous art that is not available for a Section 103 determination.

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For at least these reasons, it is respectfully requested that the rejection of claim 42 under 35 U.S.C. §103(a) as unpatentable over Kleemeier in view of any one of Ali, Edinger, Clemente, and Manor, and further in view of Long be withdrawn.

CONCLUSION

Appellant submits that the Examiner has presented the best available references against the claimed subject matter of the pending application. Reversal of the rejections of claims 1-9, 14, 15, 28-34, 37, 38, 41, and 42 is respectfully requested.

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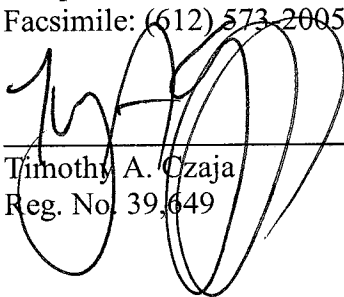
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CLAIMS APPENDIX

1. A conversion pad for attaching an abrasive article to a back-up pad of a sanding tool, said conversion pad having a non-adhesive engagement surface releasably attached to the back-up pad and an attachment system comprising a first major surface opposite the non-adhesive surface that includes an attachment region with attachment material for attachment with an associated mating surface, and a non-attachment region along at least a portion of an edge of said first major surface for forming an attachment with the associated mating surface that is weaker than the attachment between the attachment region and the associated mating surface, whereby a user can grasp a portion of the abrasive article adjacent the non-attachment region and thereby separate the abrasive article from the first major surface.
2. A conversion pad as defined in claim 1, wherein said attachment system comprises a first major surface of said conversion pad, said conversion pad having a second major surface opposite said first major surface adapted to engage the sanding tool.
3. A conversion pad as defined in claim 1, wherein said associated mating surface of said abrasive article comprises a first major surface and a second major surface opposite said first major surface, said second major surface including abrasive for abrading a work surface, and further wherein the attachment region of said conversation pad attachment system is configured to form a releasable connection with said first major surface of said abrasive article, said releasable connection characterized as being sufficiently secure to resist relative movement of said abrasive article relative to said conversion pad when rotating said abrasive article as part of a sanding operation.
4. A conversion pad as defined in claim 3, wherein said attachment region comprises a centrally located region of said first major surface and said non-attachment region comprises a continuous edge region extending around the entire perimeter of said first major surface.

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5. A conversion pad as defined in claim 4, wherein said attachment region comprises a plurality of mechanical fastening elements.
6. A conversion pad as defined in claim 5, wherein said mechanical fastening elements comprise hook-type fastening elements.
7. A conversion pad as defined in claim 4, wherein said attachment region is a circular region covering a majority of said first major surface and said non-attachment region comprises an annular region extending around the entire perimeter of said first major surface.
8. A conversion pad as defined in claim 1, wherein said non-attachment region includes fastening elements that have been altered to inhibit attachment of said fastening elements with said associated mating surface.
9. A conversion pad as defined in claim 8, wherein said fastening elements have been bent to prevent attachment of the fastening elements with said associated mating surface.
10. A conversion pad as defined in claim 8, wherein said non-attachment region includes a coating material applied to said fastening elements to inhibit attachment of the fastening elements with an associated mating surface.
11. A conversion pad as defined in claim 10, wherein said coating material is a sheet of material applied to the terminal ends of said fastening elements, thereby covering said fastening elements and preventing said fastening elements from attaching to an associated attachment surface.

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12. A conversion pad as defined in claim 10, wherein said coating material is a hardenable liquid applied to fill the open space around said fastening elements, thereby preventing said fastening elements from attaching to an associated attachment surface.

13. A conversion pad as defined in claim 1, wherein said non-attachment region is free of attachment material.

14. A conversion pad as defined in claim 1, wherein said attachment region and said non-attachment region are co-planar.

15. A conversion pad as defined in claim 1, wherein the conversion pad and the abrasive article have substantially the same profile and have aligned outer edges.

16. A conversion pad as defined in claim 1, wherein said attachment material comprises adhesive.

17. – 27.(Cancelled)

28. A conversion pad for attaching an abrasive to a sanding tool, said conversion pad comprising first and second opposed major surfaces, said first major surface being adapted for engagement with a back-up pad of said sanding tool and said second major surface including an attachment surface including attachment material for attaching said conversion pad with an abrasive article and a non-attachment surface along at least a portion of an edge region of said second surface, thereby to allow a user to grasp the abrasive article and separate the abrasive article from the conversion pad, wherein said attachment surface and said non-attachment surface each terminate opposite said first major surface, and further wherein said attachment and non-attachment surfaces are co-planar opposite said first major surface.

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29. A conversion pad as defined in claim 28, wherein said non-attachment region comprises a continuous edge region extending along the entire perimeter of said second surface.

30. A conversion pad as defined in claim 28, wherein said attachment surface comprises a plurality of mechanical fastening elements.

31. A conversion pad as defined in claim 30, wherein said mechanical fastening elements comprise hook-type fastening elements.

32. A conversion pad as defined in claim 31, wherein said conversion pad is circular and said non-attachment region comprises an annular region extending along the entire perimeter of said second surface.

33. A conversion pad as defined in claim 32, wherein said non-attachment region includes fastening elements that have been altered to inhibit attachment of the conversion pad with the abrasive pad.

34. A conversion pad as defined in claim 33, wherein the conversion pad and the abrasive article have substantially the same profile and have aligned outer edges.

35. – 36.(Cancelled)

37. An abrading tool including a back-up pad, a conversion pad connected with the back-up pad, and an abrasive article connected with the conversion pad, wherein the back-up pad, the conversion pad and the abrasive article have substantially the same profile and have aligned outer edges, and further wherein the conversion pad comprises first and second opposed major surfaces, said second major surface including an attachment region including attachment material for attaching said conversion pad with the abrasive article and a non-attachment region along at

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least a portion of an edge region of said second surface, thereby to allow a user to grasp the abrasive article and thereby separate the abrasive article from the conversion pad.

38. An abrading tool as defined in claim 37, wherein the back-up pad, conversion pad and abrasive article are circular.

39. – 40.(Cancelled)

41. The abrading tool as defined in claim 37, wherein the conversion pad is removably connected to the back-up pad.

42. The abrading tool as defined in claim 37, wherein said conversion pad includes a backing defining said first major surface and a plurality of fastening elements extending from said backing across an entirety of a face of said backing opposite said first major surface.

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EVIDENCE APPENDIX

All the evidence related to this Appeal is on the record and before the Board. Therefore, no additional evidence is identified in this Appendix.

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RELATED PROCEEDINGS APPENDIX

There are no additional related proceedings to be considered in this Appeal. Therefore, no such proceedings are identified in this Appendix.